

State of Illinois  
Department of Transportation  
Division of Highways  
Springfield

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SPECIFICATIONS  
FOR  
CUTTING EDGES FOR SNOWPLOWS

Serial Number: M50-02

1. Material. The cutting edges shall be formed from open-hearth carbon steel or other steels meeting the approval of the Department.
2. Composition. If formed from open-hearth carbon steel the cutting edges shall conform to the following requirements:

	<u>Minimum</u>	<u>Maximum</u>
Carbon, Percent	0.75	1.00
Manganese, Percent	0.50	0.90
Phosphorous, Percent	-	0.05
Sulphur, Percent	-	0.05
Silicon, Percent	-	0.30

If alloy or special composition is used, its composition shall be approved in writing by the Department.

3. Chemical Analysis. An analysis of each melt of steel shall be made by the manufacturer to determine the percentages of the elements specified in Paragraph 2. This analysis shall be made from a test ingot taken during the pouring of the melt. The chemical composition thus determined shall be reported to the Department and shall conform to the requirements specified in Paragraph 2.
4. Check Analysis. An analysis may be made by the Department from a finished cutting edge and the composition thus determined shall comply with the requirements specified in Section 2 above.
5. Hardness. The finished cutting edges shall have a Rockwell C Scale hardness of not less than 25 nor more than 35. The Rockwell hardness shall be determined on a finished cutting edge in accordance with the Standard Methods of Test for Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials, ASTM Designation: E-18.

6. Dimensions. The cutting edges shall conform to the Illinois Department of Transportation Code Numbers as shown on the drawings, or they shall fit the plow as identified by the manufacturer's name and model where the code number is not shown. For code number drawings, contact the Bureau of Materials and Physical Research, Engineer of Tests at (217) 782-7200. Allowable tolerances for dimensions and punched holes shall be in accordance with standard commercial practice. All snowplow blades to be square edge flat unless otherwise specified.
7. Finish. The finished cutting edges shall be straight, free from flaws and injurious defects, and shall have a workmanlike finish. All surfaces shall be painted with one coat of paint or lacquer meeting the approval of the Department.
8. Inspection. All cutting edges shall be inspected by the Department for compliance with the specifications. The inspection may be performed upon the finished cutting edges subsequent to delivery or if the Department elects, the inspection may be undertaken at the place of manufacture, in which case the inspector representing the Department shall have free entry to all parts of the manufacturer's plant which concern the production of the cutting edges ordered.
9. Marking. The model of the plow on which the cutting edge is to be used or the code number shall be painted or stamped with 3-inch letters or numbers on the front and back of each cutting edge.
10. Hole Punching. All cutting edges shall be punched to accept #3 countersunk head, squareneck (plow) bolts.

Effective February 1, 2002

This specification supersedes Serial Number M50-88, effective February 1, 1988.

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